Aviation Safety Investigation Report 199400523

Fairchild Industries Inc Metro III British Aerospace Plc Jetstream

03 March 1994

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Occurrence Number:	199400523	Occurrence Ty	pe: Incident
Location:	110km N Sydney		
State:	NSW	Inv Category:	3
Date:	Thursday 03 March	1994	
Time:	0658 hours	Time Zone	ESuT
Highest Injury Level: None			
Aircraft Manufacture Aircraft Model: Aircraft Registration: Type of Operation: Damage to Aircraft: Departure Point: Departure Time: Destination:	r: British Aerospace 3107 VH-TQL Air Transport Pas Nil Williamtown NSW 0652 ESuT Sydney NSW	Plc Se ssenger Scheduled	rial Number: 707
Aircraft Manufacturer: Fairchild Industries Inc			
Aircraft Model:	SA227-AC		
Aircraft Registration:	VH-SSV	Serial Number	:
Type of Operation:	Charter Cargo	0	
Damage to Aircraft:	Nil		
Departure Point:	Bankstown NSW		
Departure Time:	0642 ESuT		
Destination:	Coffs Harbour NS	W	

Approved for Release: Monday, July 17, 1995

Factual Information

Sequence of Events

The crew of VH-SSV planned for a flight from Bankstown to Coffs Harbour as VH-SSW. The plan nominated flight within controlled airspace (CTA). A change of aircraft occurred and, after taxiing to the holding point, it was established that air traffic control (ATC) would require a delay before issuing a departure clearance into CTA. The crew therefore decided to proceed outside controlled airspace (OCTA) and departed at 0642 ESuT, climbing below the CTA steps.

At 0646 the aircraft passed the Hawkesbury Bridge and the crew transferred to the flight service (FS) area frequency of 125.7 MHz. They requested that the flight service officer (FSO) inquire of Sydney Sector 1 (Sec 1) if an airways clearance was available as they had planned about 70 minutes earlier. This request was not relayed to Sec 1 until 0654 due to the workload on FS 4. At the time of the co-ordination, the sector controller had not received the flight plan details at the console.

Also at this time, the FSO passed traffic information on two IFR aircraft which were in the area and in possible conflict. Consequently, the crew of one of these aircraft (VH-KZQ) and the crew of VH-SSV arranged mutual vertical separation. During this time the crew of VH-SSV reported maintaining 6,000 ft to FS.

VH-TQL had planned a flight from Williamtown to Sydney at FL120 and at 0647 the crew reported taxiing at Williamtown on area frequency as Williamtown ATC had not yet commenced duty. RAAF ATC were due to commence services at 0700. This taxi call is required to be co-ordinated with Sec 1 and this was completed at 0651, delayed due to workload on FS 4.

At 0653 the crew of VH-TQL reported to FS its departure of 0652 and, as the airspace was uncontrolled, they were required to remain OCTA until Sec 1 could issue an airways clearance. As a result, VH-TQL was levelled at 8,000 ft to remain OCTA while awaiting airways clearance.

The FSO providing the FS 4 service had received from Sec 1 an expectancy that VH-TQL would be given an airways clearance with little or no delay and therefore instructed the crew to contact control on 123.4 MHz on reaching 8,000 ft for a clearance and asked the crew to report approaching 8,000 ft before leaving his frequency. 123.4 MHz is Sydney Arrivals Control and the responsibility for informing that controller lies with Sec 1.

At 0654 FS 4 co-ordinated with Sec 1 regarding the request from VH-SSV for an airways clearance. This was the first time that Sec 1 had been passed information on this aircraft but agreed to take the aircraft on frequency for processing. FS 4 instructed the crew of VH-SSV to contact control on 126.9 MHz (Sec 1) for a clearance. It is the responsibility of Sydney Departures Procedural control to inform Sec 1 when an aircraft that has planned in CTA from Bankstown departs OCTA and requires a clearance en-route. This co-ordination was not carried out.

As the crew of VH-SSV were transferring frequencies, they observed that they had passed the next control area step and elected to climb to 8,000 ft OCTA while awaiting their airways clearance from Sec 1. Due to a delay in the issuing of the clearance, the aircraft was levelled at 8,000 ft in order to remain OCTA. As their track was 002 degrees, both 8,000 ft and their previous cruising level of 6,000 ft were contrary to the table of hemispherical cruising levels. At 0655 FS 4 co-ordinated the departure time of VH-TQL with Sec 1. The Sec 1 controller found that he had four aircraft OCTA all wanting airways clearances. He decided to instruct all four to remain OCTA until he had identified them on radar so that he could guarantee adequate separation within CTA. This resulted in a short delay for both VH-TQL and VH-SSV while on separate control frequencies and both maintaining 8,000 ft on conflicting tracks.

While Sec 1 was co-ordinating the clearances for the two aircraft with arrivals control, the initial radar returns indicated that the aircraft were in close proximity and on converging headings. The sector controller issued VH-SSV with a radar vector OCTA for collision avoidance. Traffic information was passed to both crews and a mutual sighting was achieved during the turn manoeuvre.

The aircraft passed approximately 600 m apart at the same altitude.

Flight Planning

It is common practice for pilots to plan IFR in CTA ex Bankstown and then elect to proceed OCTA when ATC issue a delay for an airways clearance. It is also common practice for crews to hold a second, OCTA, plan in the cockpit for such eventualities. However, they do not submit this OCTA plan as the pilots prefer to operate IFR in CTA and they believe that ATC will always send them OCTA if such a choice exists on the flight plan. This causes problems in the distribution of flight details to FS.

Co-ordination

When an aircraft departs OCTA from Bankstown having planned in CTA, Bankstown ATC are required to pass the details to Sydney FS and Departures Procedural. Departures Procedural then passes this information on to Sec 1 for processing.

Hemispherical Levels

IFR aircraft are required to be flown in accordance with the table of hemispherical cruising levels. On this occasion the crew of VH-SSV chose to fly at a non-hemispherical level. The correct altitudes for their track would have been 5,000 ft and 7,000 ft in lieu of 6,000 ft and 8,000 ft.

Change of Level OCTA

The crew of VH-SSV were maintaining 6,000 ft when transferred by FS to control frequency. Shortly after, they initiated climb to 8,000 ft to remain OCTA in the belief that a clearance would be given by the time they reached that level, however the delay in obtaining the clearance resulted in the aircraft maintaining 8,000 ft. Neither the crew nor ATC informed FS of this change in altitude, which is contrary to requirements.

The FSO did not pass traffic to either aircraft in the belief that they were separated by IFR cruising levels, but he was aware of the requirement for VH-SSV to pass through the level of VH-TQL once ATC issued approval for climb into CTA. He considered that ATC would separate the aircraft on climb as both were on control frequencies with an expectancy of an airways clearance almost immediately (as this was normal practice).

Control Frequencies/Airspace Configuration

The two aircraft were transferred to separate ATC frequencies by the FSO. This was common practice but was not in accordance with Local Instructions. It resulted in neither crew being able to hear transmissions involving the other at a time when they were on conflicting tracks. The correct procedure would be for both aircraft to contact Sec 1 whose airspace they were about to enter.

FS Workload

The FSO was rostered to perform the FS 4 duties on his own until 0800 when a relief officer commences duty. The workload builds up after 0630 each morning and becomes very busy from approximately 0645. It has become common practice for the FS 4 operator to request the assistance of the Team Leader to act as co-ordinator during this period.

One reason for this rise in workload is that Williamtown ATC commence duty at 0700 each weekday and this results in an added workload for the FS 4 operator in that an update of all traffic in the Williamtown area is required to be passed to ATC. The process for passing this information is very formal and convoluted.

Findings

1. No flight plan for VH-SSV to depart Bankstown OCTA was submitted.

2. Sydney Departures Procedural did not co-ordinate the departure of VH-SSV as required by Sydney District Local Operating Instructions.

3. The FSO was experiencing a period of heavy workload.

4. The two aircraft were transferred to different control frequencies.

Significant Factors

1. The crew of VH-SSV elected to fly at a non hemispherical altitude.

2. Neither the crew of VH-SSV nor ATC informed FS4 that the aircraft had changed level while remaining OCTA.

3. The FSO did not pass traffic information on either aircraft to the crew of the other.

Safety Action

As a result of the investigation the following Safety Advisory Notices were issued:

SAN 940093: The Bureau of Air Safety Investigation suggest that the Civil Aviation Authority and the RAAF conduct a joint review of their procedures with respect to:

(a) the coordination of traffic information concerning aircraft departing WLM CTR for possible climb or cruise OCTA;

(b) notification of the opening of military airspace, with particular reference to RAAF/FIS coordination.

SAN940079: The Bureau of Air Safety Investigation suggests that the Civil Aviation Authority conducts a consultative meeting with local industry to discuss the practices and procedures used for IFR operations in Sydney airspace. This meeting should particularly address those operations departing Bankstown OCTA.

The Bureau issues the following, additional, Safety Advisory Notice:

SAN940095: The Bureau of Air Safety Investigation suggests that the Civil Aviation Authority review the staffing procedures at Flight Service Units to ensure that they are adequately manned during known periods of high workload.